

more congruous to Glas then Air, and Air then Quicksilver.

A Second thing (which was hinted to me, by the consideration of the included fluids globular form, caused by the protrusion of the ambient heterogeneous fluid) was, whether the *Phænomena* of gravity might not by this means be explained, by supposing the *Globe* of Earth, Water, and Air to be included with a *fluid*, heterogeneous to all and each of them, so subtil, as not only to be every where *interspersed* through the *Air*, (or rather the *air* through it) but to *pervade* the bodies of *Glass*, and even the *closest Metals*, by which means it may endeavour to *detrude* all earthly bodies as far from it as it can; and partly thereby, and partly by other of its properties may move them towards the Center of the Earth. Now that there is some such fluid, I could produce many Experiments and Reasons, that do seem to prove it: But because it would ask some time and room to set them down and explain them, and to consider and answer all the *Objections* (many whereof I foresee) that may be alledged against it; I shall at present proceed to other *Queries*, contenting my self to have here only given a hint of what I may say more elsewhere.

A Third *Query* then was, Whether the *heterogeneity* of the *ambient fluid* may not be accounted a *secondary cause* of the roundness or globular form of the greater bodies of the world, such as are those of the *Sun*, *Stars*, and *Planets*, the substance of each of which seems altogether *heterogeneous* to the *circum-ambient fluid æther*? And of this I shall say more in the *Observation* of the Moon.

A Fourth was, Whether the *globular form* of the smaller parcels of matter here upon the *Earth*, as that of *Fruits*, *Pebbles*, or *Flints*, &c. (which seem to have been a *Liquor* at first) may not be caused by the *heterogeneous ambient fluid*. For thus we see that melted *Glass* will be naturally formed into a *round Figure*; so likewise any small Parcel of any *fusible body*, if it be perfectly enclosed by the *Air*, will be driven into a *globular Form*; and, when cold, will be found a *solid Ball*. This is plainly enough manifested to us by their way of making *shot* with the drops of *Lead*; which being a very pretty curiosity, and known but to a very few, and having the liberty of publishing it granted me, by that *Eminent Virtuoso* Sir Robert Moray, who brought in this Account of it to the *Royal Society*, I have here transcribed and inserted.

To make small shot of different sizes; Communicated by his Highness P. R.

TAke Lead out of the Pig what quantity you please, melt it down, stir and clear it with an iron Ladle, gathering together the blackish parts that swim at top like scum, and when you see the colour of the clear Lead to be greenish, but no sooner, strew upon it Auripigmentum

pigmentum powdered according to the quantity of Lead, about as much as will lye upon a half Crown piece will serve for eighteen or twenty pound weight of some sorts of Lead; others will require more, or less. After the Auripigmentum is put in, stir the Lead well, and the Auripigmentum will flame: when the flame is over, take out some of the Lead in a Ladle having a lip or notch in the brim for convenient pouring out of the Lead, and being well warmed amongst the melted Lead, and with a stick make some single drops of Lead trickle out of the Ladle into water in a Glass, which if they fall to be round and without tails, there is Auripigmentum enough put in, and the temper of the heat is right, otherwise put in more. Then lay two bars of Iron (or some more proper Iron-tool made on purpose) upon a Pail of water, and place upon them a round Plate of Copper, of the size and figure of an ordinary large Pewter or Silver Trencher, the hollow whereof is to be about three inches over, the bottom lower then the brims about half an inch, pierced with thirty, forty, or more small holes; the smaller the holes are, the smaller the shot will be; and the brim is to be thicker then the bottom, to conserve the heat the better.

The bottom of the Trencher being some four inches distant from the water in the Pail, lay upon it some burning Coles, to keep the Lead melted upon it. Then with the hot Ladle take Lead off the Pot where it stands melted, and pour it softly upon the burning Coles over the bottom of the Trencher, and it will immediately run through the holes into the water in small round drops. Thus pour on new Lead still as fast as it runs through the Trencher till all be done; blowing now and then the Coles with hand-Bellows, when the Lead in the Trencher cools so as to stop from running.

Whilst one pours on the Lead, another must, with another Ladle, thrust four or five inches under water in the Pail, catch from time to time some of the shot, as it drops down, to see the size of it, and whether there be any faults in it. The greatest care is to keep the Lead upon the Trencher in the right degree of heat; if it be too cool, it will not run through the Trencher, though it stand melted upon it; and this is to be